

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A process for making an *in vivo* model of human leukemia comprising

a) pre-conditioning an immunodeficient mouse by administering to the mouse a sub-lethal dose of irradiation and injecting the mouse with an effective pre-conditioning amount of mononuclear cells derived from human fetal cord blood;

b) maintaining the mouse from step (a) for 5 to 10 days;
and

c) injecting the mouse from step (b) with an effective engrafting amount of primary human leukemia cells; and

d) allowing the primary human leukemia cells to engraft in the mouse to produce the *in vivo* model of human leukemia.

2. (Canceled)

3. (Previously presented) The process of claim 1 wherein the immunodeficient mouse is a NOD/scid mouse.

4. (Previously presented) The process of claim 1 wherein administering the sub-lethal dose of irradiation is accomplished by irradiating the mouse with 300 to 400 rads of total body gamma radiation.

5. (Previously presented) The process of claim 1 wherein the effective engrafting amount of primary human leukemia cells is from 10^6 to 10^7 cells.

6. (Original) The process of claim 1 wherein the primary human leukemia cells are T-cell acute lymphoblastic leukemia (T-

ALL) cells.

7. (Previously presented) The process of claim 1 wherein the effective pre-conditioning amount of human fetal cord blood mononuclear cells is from 10^6 to 10^8 cells.

8. (Original) The process of claim 1 wherein the mononuclear cells are stem cells.

9. (Original) The process of claim 8 wherein the stem cells comprise mesenchymal stem cells.

10-16. (Canceled)

17. (Currently amended) A process for making an *in vivo* model of human leukemia comprising

a) pre-conditioning an immunodeficient mouse by administering to the mouse a sub-lethal dose of irradiation and injecting the mouse with an effective pre-conditioning amount of stem cells derived from bone marrow;

b) maintaining the mouse from step (a) for 5 to 10 days;
and

c) injecting the mouse from step (b) with an effective engrafting amount of primary human leukemia cells; and

d) allowing the primary human leukemia cells to engraft in the mouse to produce the *in vivo* model of human leukemia.